

Sun Woo Kim

Updated September 24, 2026

Email: ska503@sfu.ca **Homepage:** <https://pulsekim.github.io/> **Linkedin:** Click this link

Research Interests

- Physics & kinematics based character & robot animation
- Deep reinforcement learning for character and robot motion control
- Text-to-motion retrieval and generation
- Body gesture generation for conversational agents

Education

Simon Fraser University

Ph.D. Student in Computing Science
Supervisor: Xue Bin (Jason) Peng

British Columbia, Canada

Sep 2025 – Present

Seoul National University

Master's degree in Computer Science
Supervisor: Jehee Lee

Seoul, Korea

Sep 2019 – Sep 2022

Thesis: *Developing Motion Control of Different Morphology using Deep Reinforcement Learning*

Pohang University of Science and Technology (POSTECH)

Bachelor's degree in Creative IT Engineering
Magna cum laude GPA: 3.88 / 4.3

Pohang, Korea

Feb 2015 – Feb 2019

Work Experience

NC AI (Spun offed from NCSoft)

Graphics AI Researcher, Motion Service Lab
Research Topic: Text to motion retrieval & generation

Sungnam, Korea

Feb 2025 – Sep 2025

NCSoft

Graphics AI Researcher, Graphics AI Lab
Research Topic: Gesture generation & Video to Motion

Sungnam, Korea

Aug 2022 – Feb 2025

Publications

DSD: Learning Diverse and Reusable Motor Skills via Diffusion Skill Discovery

Sun Woo Kim, Xue Bin Peng
arXiv preprint arXiv:2609.17682, 2026

Controllable Single Motion Synthesis

Taehyun Byun, Sunwoo Kim, Minwook Chang, Sungjoon Choi
Pattern Recognition(Under Revision), 2026

Body Gesture Generation for Multimodal Conversational Agents

Sunwoo Kim, Minwook Chang, Yoonhee Kim, Jehee Lee
SIGGRAPH Asia, 2024.

Towards Natural Prosthetic Hand Gestures: A Common-Rig and Diffusion Inpainting Pipeline

Seungyup Ka, Taemoon Jeong, Sunwoo Kim, Sankalp Yamsani, Joohyung Kim, Sungjoon Choi
IEEE Engineering in Medicine and Biology Society (EMBC), 2024.

Human Motion Control of Quadrupedal Robots using Deep Reinforcement Learning

Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha
Robotics: Science and Systems (RSS), 2022.
Emerging Technologies, SIGGRAPH Asia, 2022.

Awards & Scholarships	Special Grad Entrance Scholarship (CS Department, SFU)	2025
	Runner-up: KCGS Master's Award (Korea Computer Graphics Society)	2022
	Grand Prize: Creative ICT Forum (Ministry of Science and ICT, Korea)	2018
	Grand prize: Creative Design III (POSTECH)	2017
	Grand prize: Creative Design II (POSTECH)	2016
Teaching Experience	Teaching assistant , Seoul National University	Spring 2021
	Core Computing: Computation thinking (Prof. Jehee Lee)	
	Undergraduate tutor , POSTECH	Spring 2018
	Intro to Digital System & Microprocessor Design (Prof. Jaejoon Kim)	
Professional Service	Paper Reviewer SIGGRAPH, SIGGRAPH Asia, TVCG	
Other Experience	Booth Staff , NC AI exhibition booth at SIGGRAPH Varco Animation: AI tool for motion retrieval & generation.	2025
References	Prof. Xue Bin (Jason) Peng Assistant Professor, Simon Fraser University Research Scientist, NVIDIA xbpeng@sfu.ca Prof. Jehee Lee Professor, Seoul National University jeheel@snu.ac.kr Prof. Sehoon Ha Assistant Professor, Georgia Institute of Technology sehoonha@gatech.edu	